

Grade 5 Matter, Energy, Life-on-Earth
Quarter 2

2013-2014 School Year

Welcome!

Please read the syllabus and project trees with your parents this week. Consider how far you would like to climb up the Grading Scale. **Have a parent sign this sheet, and turn it in to Ms. Miller on November 13th for an Extra Credit Point.**

Signature:

4/5th Science Lab Intern: Ms. Miller
Contact: ecmiller@ucsd.edu

How your final quarter grade is Determined:

25% Theory

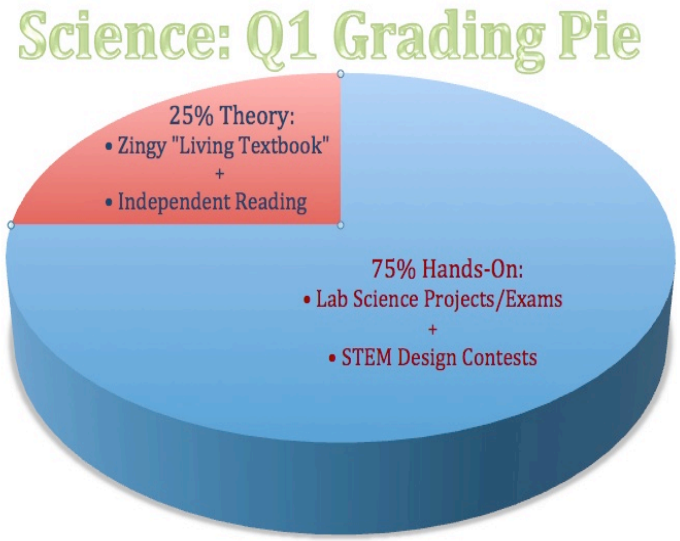
(Separate grade for Zingy lessons)

75% Projects:

Grading Scale
(Achievement Ladder)

10/11 Projects Passed = A+
9/11 Projects Passed = A
8/11 Projects Passed = B+
7/11 Projects Passed = B
6/11 Projects Passed = C+
5/11 Projects Passed = C
4-0/11 Projects Passed = Incomplete

Grading Pie



Notes:

Exceptional Projects pass with " **Flying Colors** " and earn **EXTRA CREDIT** .

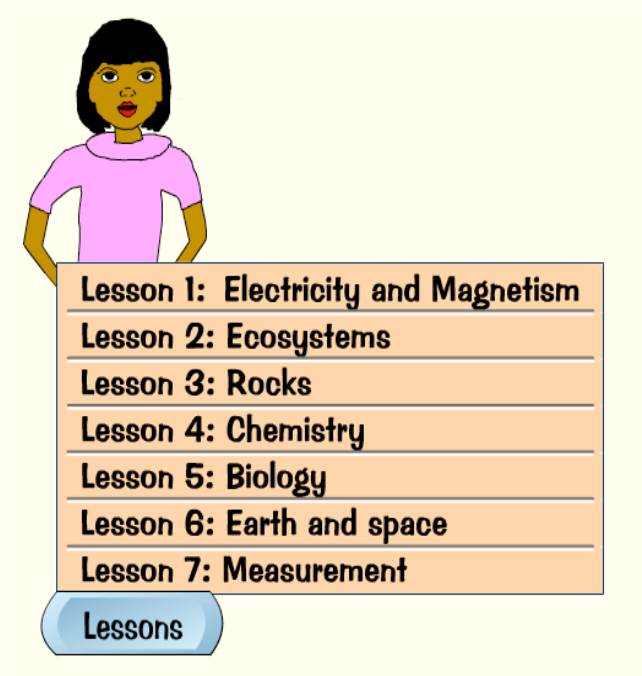
10 Extra Credit points = 1 Project Point. Extra Credit Points roll over between quarters.

These Projects are to be done BY YOURSELF or in your ASSIGNED GROUP (with coaching from teachers and family members, of course). To earn a Project Point, each student must do a fair share and be able to pass the Project Oral Exam by themselves.

You have 10 weeks of class and 2 Project work-periods a week. There are 11 Projects total. There will not be class time set aside for you to work on all 11 PROJECTS. Therefore you will probably have to do some on YOUR OWN TIME TO RECEIVE AN “A” in Science.

INDEPENDENT PROJECTS: Projects for which there is no planned class time are marked as “**Optional**”. These projects must be completed at home. **START EARLY. FINISH EARLY**!

25% Theory Portion: Zingy Online Textbook



Zingy Lessons for Quarter 2:

Lesson 4: Chemistry
Topic 1: Atoms
Topic 2: Images of Atoms
Topic 3: Elements and Compounds
Topic 4: Metals, salts, molecules

Lesson 5: Biology
Topic 1: Plants and Photosynthesis
Topic 2: Cellular Respiration
Topic 3: Circulatory System
Topic 4: Digestive System
Topic 5: Urinary System
Topic 6: Activity

Zingy Access: zingylearning.com

Tips for Accessing Zingy:

- Each student has a "How to Access Zingy" sheet in their binder from first quarter.
- Check that your browser is compatible: Google Chrome or Safari work well. Internet Explorer will have problems.
- Students have to click the "Lessons" Bar at the top and go through the lessons BEFORE attempting the quizzes. Otherwise your progress might not save.
- There will not be much class time for working on Zingy. Please work on Zingy as homework.
- Check Zingy Tree or syllabus for specific assigned lessons for the quarter.

Outside Reading and Viewing:

For **Flying Colors** extra credit points: See Zingy Tree for a list of Extra Credit Opportunities! Remember 10 Extra Credit Points = 1 Project Point

Foundation Project Checklists (To be completed in class)

1	**Elements of Life**	Start ☛	**11/13**

Students will be assigned into groups, and given one of seven elements: Carbon, Nitrogen, Oxygen, Calcium, Phosphorus, Sodium, and Hydrogen.

To receive credit for this Project:
Design a poster for your element, showing:
- ☐ A drawing of the element with correct number of neutrons, protons, and electrons
- ☐ Where can this element be found in nature
- ☐ Why this element is important for life on Earth
- ☐ Present your poster design as a group and explain your findings.

To Pass with Flying Colors:

Memorize the first 10 elements of the Periodic Table and pass an oral presentation.

2	**Design an Experiment (Triple Project!)**	Start ☛	**11/18**
	Due ⏱	**12/18**	

Students will work in groups to 1) Design an experiment using the scientific method, 2) Collect data, and 3) Write a report on their results. **This project is worth 3 Project Points.** Students must do their fair share in their group to receive credit.

To receive credit for this Project:
- ☐ Write an Experiment Plan with variables clearly identified.
- ☐ Record data in their blue science notebook. Share data with their group.
- ☐ Write a report (due before holiday break) explaining the experimental design, procedure, results, and conclusions.

CONTEST: The group that most successfully conducts a fair and rigorous experiment, with a clear understanding of results, **will receive 5 Extra Credit points each.**

3	**Photosynthesis and Respiration**	Start ☛	**12/4**

Students will build the photosynthesis and respiration reactions using gumdrops to represent each element.

To receive credit for this Project:
- ☐ Write out the photosynthesis and respiration reactions
- ☐ Build reactions using gumdrops (before and after!)

4	**Plant and Animal Cells**	Start ☛	**12/9**

Students will mount their own microscope slides for plant (onion) and animal (cheek) cells.

To receive credit for this Project:

☐ Work in group to mount microscope slides

☐ Complete in-class assignment

To Pass with Flying Colors:

Draw your cell using the medium of your choice (colored pencils, paint, etc)

5	**Introduction to Organ Systems**	Start ☛	**1/6**

We will have in-class activities to introduce students to organs of the human body.

To receive credit for this Project:

☐ Complete in-class assignment.

6	**Assemble a Body**	Start ☛	**1/13**
	Due	**1/15**	

Students will work independently to create a paper version of the human body.

To receive credit for this Project:

☐ Color organs according to instructions

☐ Cut out organs and assemble correctly on paper person

☐ Pass an oral exam.

7	**President of the Human Body**	Start ☛	**1/20**
	Due	**1/22**	

Students will work in groups to build a campaign for why their assigned organ should be "President of the Human Body." Choices include: heart, lungs, brain, skin, liver, kidneys, and stomach.

To receive credit for this Project:

☐ Write speech for why your organ should be "President of the Human Body." Students must put in their fair share to receive credit.

☐ Give speech to class.

To Pass with Flying Colors:

The group with the most convincing speech will receive 5 Extra Credit points each.

Optional Project Checklists (To be completed independently)

All Optional Projects have a Start Date of 11/6 and a Due Date of 1/27. That means you have the entire quarter to work on them, but it is up to you to manage your time! Optional projects are worth 1 Project Point each, and can be used to make up absent days or achieve an A or A+ in science.

1	**Food Journal**

Students will keep a log of their diet to understand where their nutrients come from.

To receive credit for this Project:

- ☐ Keep a log of everything you eat for 1 day.
- ☐ Identify sources of 1) fat 2) carbohydrates 3) protein 4) vitamins and minerals and 5) salts.
- ☐ What are the largest sources of each nutrient type in your diet?

To Pass with Flying Colors:
Include a recipe for a food that contains all 5 types of nutrients listed above.

2	**Journey Through the Human Body**

Choose one of the following: A sandwich, or an oxygen molecule.

To receive credit for this Project:

- ☐ Write a 1 page narrative telling the story of the thing you chose.
- ☐ What is the journey your sandwich/oxygen molecule takes when it enters the human body?
- ☐ What major organs does it travel through?
- ☐ Does it go through any changes when it travels through your body?

To Pass with Flying Colors:
Present your narrative to the class.